UNITED STATES PATENT AND TRADEMARK OFFICE

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22850 7590 11/14/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314	**EXAMINER** TSAI, TSUNG YIN

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10/18/2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAIL ACTION

Acknowledge of amendment received on 10/18/2007 and made of record.

Acknowledge of amendment to claims 1-2, 4-6 and 9-24.

Acknowledge of new claim 25.

Response to Arguments

Applicant's argument – Amended claims 17-24 as requested by the Examiner.

Examiner's response – 35 USC 101 rejections withdrawn due to correction.

Applicant's argument – Thus, it is respectfully submitted that Wendt does not teach that the calculated deviation information is used to create a corrected watermark, and that the corrected watermark is compared to any other reference.

Examiner's response – Wendt teaches that the calculated deviation information (page 2 paragraph 0022 disclose such correlation, where correlation is seen as the deviation of the image data that are being compare) is used to create a corrected watermark (title disclose watermarking), and that the corrected watermark (title discloses regarding watermarking) is compared to any other reference (page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest).

Applicant's argument – Further, Wendt does not describe determining if the corrected

first image matches the second image based on results of correlation processing. As

noted above, once Wendt determines the deviation information, the watermark is simply

read using the deviation information.

Examiner's response – Wendt describe determining if the corrected (page 3

paragraph 0033 disclose correction information such as actual and reference position

and size which can further adjust image by resizing and rotation patter of image) first

image (page 2 paragraph 0013 disclose first and second selected pattern/images, page

2 paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first and

second images) matches the second image (page 2 paragraph 0013 disclose first and

second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images) based on results of correlation processing (page

2 paragraph 0022 disclose such correlation, where correlation is seen as the deviation

of the image data that are being compare).

Applicant's argument – Thus, Wendt does not describe any means for performing a

correlation comparison between a corrected first image and a second image, or means

for determining if a corrected first image matches a second image based on results of

correlation processing. Therefore, is respectfully submitted Wendt does not teach "a

matching means" as defined in amended Claim 1. Consequently, Claim 1 (and Claims

2-8 dependent therefrom) is not anticipated by Wendt and is patentable thereover.

Examiner's response –Wendt describe any means for performing a correlation

comparison (page 2 paragraph 0022 disclose such correlation, where correlation is

seen as the deviation of the image data that are being compare) between a corrected

(page 3 paragraph 0033 disclose correction information such as actual and reference

position and size which can further adjust image by resizing and rotation patter of

image) first image (page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first

selected pattern/image to that of the reference in stored memory, thus there are the first

and second images) and a second image (page 2 paragraph 0013 disclose first and

second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images), or means for determining if a corrected first

image (page 2 paragraph 0013 disclose first and second selected pattern/images, page

2 paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first and

second images) matches a second image (page 2 paragraph 0013 disclose first and

second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images) based on results of correlation processing (page

2 paragraph 0022 disclose such correlation, where correlation is seen as the deviation
of the image data that are being compare).

Applicant's argument – Wendt does not describe performing a correlation comparison
between a corrected first image and a second image, or determining if a corrected first
image matches a second image based on results of correlation processing. Therefore,
is respectfully submitted Wendt does not teach "performing a correlation comparison" or
"determining if the corrected first image matches the second image" as defined in
amended Claims 9 and 17.Consequently, Claims 9 and 17 (and Claims 10-16 and 18-
24 dependent therefrom) are not anticipated by Wendt and is patentable thereover.

Examiner's response – Wendt describe determining if the corrected (page 3
paragraph 0033 disclose correction information such as actual and reference position
and size which can further adjust image by resizing and rotation patter of image) first
image (page 2 paragraph 0013 disclose first and second selected pattern/images, page
2 paragraph 0023 disclose comparing the actual geometric of first selected
pattern/image to that of the reference in stored memory, thus there are the first and
second images) matches the second image (page 2 paragraph 0013 disclose first and
second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual
geometric of first selected pattern/image to that of the reference in stored memory, thus
there are the first and second images) based on results of correlation processing (page
2 paragraph 0022 disclose such correlation, where correlation is seen as the deviation
of the image data that are being compare).

Applicant's argument – With regard to the rejection of Claims 7, 8, 15, 16, 23, and 24 as unpatentable over Wendt in view of Oosawa, it is noted that Claims 7, 8, 15, 16, 23, and 24 are dependent from Claims 1, 9, and 17, and thus are believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Oosawa does not cure any of the above-noted deficiencies of Wendt. Accordingly, it is respectfully submitted that Claims 7, 8, 15, 16, 23, and 24 are patentable over Wendt in view of Oosawa.

Examiner's response – the combine teachings of Wendt and Oosawa teaches the limitation of Claims 7, 8, 15, 16, 23, and 24. See the 35 USC 103 rejection below with motivation for combination.

Applicant's argument – Consequently, new Claim 25 is not anticipated by Wendt and is patentable thereover.

Examiner's response – Claims 25 is rejected due to the teaches of Wendt.

Claim Rejections – 35 USC 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-6, 9-12, 17-22 and 25 are rejected under 35 U.S.C. 102(b) as being

unpatentable in view of Wendt (US 2002/0090109 A1).

Wendt discloses method (abstract disclose the method of the art, page 1

paragraph 0001 disclose that this a method to be carry out) carry out by a system

(page 2 paragraph 0013 disclose format of the system by varies hardware means

that carries out the directives, page 2 paragraph 0015 further disclose the

system) regarding image matching between two images:

(1) Regarding claim 1:

a correction information generating means (page 3 paragraph 0033

disclose the deviation between the actual and reference is calculated, where this

is seen as calculating the need correction information first in order for correction,

this is also seen as the first step of a method, and first routine to be carry out on

a image such that will be up to the standards/requirement for matching) for

performing a Fourier transform and a log-polar coordinate transform (page 1

paragraph 0007 disclose apply log-polar and Fourier transform as part of the

image processing for selected image) to said first image and said second image

(page 2 paragraph 0013 disclose first and second selected pattern/images, page

2 paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images) and generating correction information (page 3 paragraph

0033 disclose correction information such as actual and reference position and

size which can further adjust image by resizing and rotation patter of image) of

said first image based on the results of said Fourier transform and log-polar

coordinate transform (page 1 paragraph 0007 disclose apply log-polar and

Fourier transforms to an image, page 3 paragraph 0033 disclose that these

function apply to the first selected image); and

a matching means (page 2 paragraph 0023 disclose comparing between

the first image and the reference image, this is also seen as the second step of a

method, and second routine to be carry out on a image such that will be up to the

standards/requirement for matching) for performing processing of correction of

said first image based on said correction information generated (page 1

paragraph 0009 disclose applying the correction changes such as the transforms

in the magnitude and phase and still able to see much of the content of the

original selected first image, page 1 paragraph 0010 further disclose these image

will be accounted, which is seen as applying correction, for rotation, resizing and

other geometric alteration for patter detection of image frames) by said correction

information generating means, **to generate a corrected** (page 3 paragraph 0033

disclose the deviation between the actual and reference is calculated, where this

is seen as calculating the need correction information first in order for correction)

first image (page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images)**, performing a correlation comparison**

(page 2 paragraph 0022 disclose such correlation) **between** said corrected first

image and said second image (page 2 paragraphs 0022 – 0027 disclose the correlation between two adjusted pattern/images, which further show that correction means of transforms are carry out than matching mean by the use of the transforms), and **determining if the corrected** (page 3 paragraph 0033 disclose the deviation between the actual and reference is calculated, where this is seen as calculating the need correction information first in order for correction) **first image** (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images) **matches** (page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest) **the second image** (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images) **base on** results of said correlation processing (page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest).

(2) Regarding claim 2:

said correction information generating means (page 3 paragraph 0033 disclose the deviation between the actual and reference is calculated, where this

is seen as calculating the need correction information first in order for correction)
performs a further Fourier transform based on the results of said log-polar
coordinate transform (page 1 paragraph 0007 disclose apply log-polar and
Fourier transform as part of the image processing for selected image) of said first
image and said second image (page 2 paragraph 0013 disclose first and second
selected pattern/images, page 2 paragraph 0023 disclose comparing the actual
geometric of first selected pattern/image to that of the reference in stored
memory, thus there are the first and second images) and generates scalar
information and/or rotation information (page 1 paragraph 0010 disclose
computing and accounting for any rotation, resizing and other geometric
alteration, page 2 paragraph 0027 disclose that these transformation does
determination such as rotation angle or resizing/scalar factors) as said correction
information based on correlation strength of said Fourier transformed first image
and second image (page 2 paragraph 0022 disclose such correlation, page 2
paragraph 0023 disclose the correction information, and page 2 paragraph 0027
disclose the Fourier transformed images for correction and comparing analysis),
and

said matching means (page 2 paragraph 0023 disclose comparing
between the first image and the reference image) **generates said corrected**
(page 3 paragraph 0033 disclose correction information such as actual and
reference position and size which can further adjust image by resizing and
rotation patter of image**)** of said first image based on said scalar information

and/or said rotation information generated (page 1 paragraph 0010 disclose

accounting the selected image of interest for any rotation, resizing/scalar or other

geometric alteration, page 2 paragraph 0027 disclose function such as log-polar,

rotation angle and resizing factor are calculated, page 3 paragraph 0033 disclose

that those deviation between the images and compare) by said correction

information generating means (page 3 paragraph 0033 disclose the deviation

between the actual and reference is calculated, where this is seen as calculating

the need correction information first in order for correction).

(3) Regarding claim 3:

wherein said correction information generating means (page 3 paragraph

0033 disclose the deviation between the actual and reference is calculated,

where this is seen as calculating the need correction information first in order for

correction) generates said scalar information and/or rotation information as said

correction information (page 1 paragraph 0010 disclose accounting the selected

image of interest for any rotation, resizing/scalar or other geometric alteration,

page 2 paragraph 0027 disclose function such as log-polar, rotation angle and

resizing factor are calculated, page 3 paragraph 0033 disclose that those

deviation between the images and compare) based on correlation strength of

phase information of said Fourier transformed first image and second image

(page 1 paragraph 0009 disclose that phase of the Fourier transform of an image

contains most of the information of the selected images, such that this

information can still disclose a large portion of information for inspection).

(4) Regarding claim 4:

wherein said correction information generating means (page 3 paragraph 0033 disclose the deviation between the actual and reference is calculated, where this is seen as calculating the need correction information first in order for correction) performs a Fourier-Mellin transform (page 1 paragraph 0007 disclose applying Fourier-Mellin transform for image processing) to said first image and said second image (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images), performs **a correlation comparison** (page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest) between said Fourier-Mellin transformed first image and second image (page 1 paragraph 0007 disclose applying Fourier-Mellin transform for image processing on images of interest), and generates said scalar information and/or rotation information as said correction information (page 1 paragraph 0010 disclose accounting the selected image of interest for any rotation, resizing/scalar or other geometric alteration, page 2 paragraph 0027 disclose function such as log-polar, rotation angle and resizing factor are calculated, page 3 paragraph 0033 disclose that those deviation between the images and compare).

(5) Regarding claim 5:

wherein said matching means (page 2 paragraph 0023 disclose

comparing between the first image and the reference image) **generate** said

corrected first image based on said scalar information and/or said rotation

information generated (page 1 paragraph 0010 disclose computing and

accounting for any rotation, resizing and other geometric alteration, page 2

paragraph 0027 disclose that these transformation does determination such as

rotation angle or resizing/scalar factors) by said correction information generating

means (page 3 paragraph 0033 disclose the deviation between the actual and

reference is calculated, where this is seen as calculating the need correction

information first in order for correction), performs processing for Fourier

transforming (page 1 paragraph 0007 disclose performing Fourier and Mellin

transform for image processing, page 1 paragraph 0009 disclose processing

image with Fourier transform and extract data from the phase of the transform) to

said corrected first image and second image (page 2 paragraph 0023 disclose

utilizing calculated deviation between two images, where utilizing deviation is

seen as correcting the selected images, page 3 paragraph 0033 disclose

deviation between two image are calculated this is seen as the corrected

information apply to selected images), and performs correlation **comparison**

(page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027

further disclose what the matching means are match against and with what

information between the two images of interest) processing based on said

Fourier transformed (page 6 paragraph 0082 disclose correlation based on fast

Fourier transforms) **corrected** first image and **said Fourier** (page 1 paragraph

0007 disclose apply Fourier transform as part of the image processing for

selected image) **transformed** second image (page 2 paragraph 0013 disclose

first and second pattern, page 2 paragraph 0023 disclose comparing between the

first pattern and a reference patter from storage, page 3 paragraph 0033 disclose

find the deviation between two images, the actual and the reference).

(6) Regarding claim 6:

wherein said matching means (page 2 paragraph 0023 disclose

comparing between the first image and the reference image) **generating**

correction (page 3 paragraph 0033 disclose calculating the deviation and using it

to compare, this is seen as the performing correction) said **corrected** first image

based on said scalar information and/or said rotation information (page 1

paragraph 0010 disclose computing and accounting for any rotation, resizing and

other geometric alteration, page 2 paragraph 0027 disclose that these

transformation does determination such as rotation angle or resizing/scalar

factors) generated by said correction information generating means (page 3

paragraph 0033 disclose the deviation between the actual and reference is

calculated, where this is seen as calculating the need correction information first

in order for correction), performs processing for Fourier **transforming** (page 1

paragraph 0007 disclose performing Fourier and Mellin transform for image

processing, page 1 paragraph 0009 disclose processing image with Fourier

transform and extract data from the phase of the transform) to said corrected first

image and second image (page 2 paragraph 0023 disclose utilizing calculated

deviation between two images, where utilizing deviation is seen as correcting the

selected images, page 3 paragraph 0033 disclose deviation between two image

are calculated this is seen as the corrected information apply to selected

images), and performs correlation processing based on phase information of said

Fourier transformed (page 1 paragraph 0009 disclose applying Fourier transform

to obtain phase information, where phase information is well know to contain

most of the information in the image) first image and second image (page 2

paragraph 0013 disclose first and second pattern, page 2 paragraph 0023

disclose comparing between the first pattern and a reference patter from storage,

page 3 paragraph 0033 disclose find the deviation between two images, the

actual and the reference).

(7) Regarding claims 9 and 17:

performing a Fourier transform and a log-polar coordinate transform (page

1 paragraph 0007 disclose apply log-polar and Fourier transform as part of the

image processing for selected image) to said first image and said second image

(page 2 paragraph 0013 disclose first and second selected pattern/images, page

2 paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images);

generating correction information (page 3 paragraph 0033 disclose

correction information such as actual and reference position and size which can

further adjust image by resizing and rotation patter of image) of said first image

based on the results of said Fourier transform and log-polar coordinate transform

(page 1 paragraph 0007 disclose apply log-polar and Fourier transforms to an

image, page 3 paragraph 0033 disclose that these function apply to the first

selected image);

correcting said first image based on said correction information (page 1

paragraph 0009 disclose applying the correction changes such as the transforms

in the magnitude and phase and still able to see much of the content of the

original selected first image, page 1 paragraph 0010 further disclose these image

will be accounted, which is seen as applying correction, for rotation, resizing and

other geometric alteration for patter detection of image frames);

performing a correlation comparison (page 2 paragraph 0023 disclose the

matching means, page 2 paragraph 0027 further disclose what the matching

means are match against and with what information between the two images of

interest) of said corrected said first image and said second image (page 2

paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images)[[,]] and

determining if the corrected first image matches the second image (page 2

paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second image) based on results of said correlation comparison processing

(page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027

further disclose what the matching means are match against and with what

information between the two images of interest).

(8) Regarding claims 10 and 18:

said performing a Fourier transform (page 1 paragraph 0007 disclose

apply log-polar and Fourier transform as part of the image processing for

selected image) includes performing a second Fourier transform to the results of

said log-polar coordinate transform (page 1 paragraph 0007 disclose apply log-

polar and Fourier transform as part of the image processing for selected image)

of said first image and said second image (page 2 paragraph 0013 disclose first

and second selected pattern/images, page 2 paragraph 0023 disclose comparing

the actual geometric of first selected pattern/image to that of the reference in

stored memory, thus there are the first and second images), and

said generating correction information (page 3 paragraph 0033 disclose

the deviation between the actual and reference is calculated, where this is seen

as calculating the need correction information first in order for correction)

includes generating scalar information and/or rotation information (page 1

paragraph 0010 disclose computing and accounting for any rotation, resizing and

other geometric alteration, page 2 paragraph 0027 disclose that these

transformation does determination such as rotation angle or resizing/scalar

factors) as said correction information (page 3 paragraph 0033 disclose the deviation between the actual and reference is calculated, where this is seen as calculating the need correction information first in order for correction) based on correlation strength (page 2 paragraph 0022 disclose such correlation) of said Fourier transformed (page 2 paragraph 0023 disclose the correction information, and page 2 paragraph 0027 disclose the Fourier transformed images for correction and comparing analysis) first image and second image (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images), and

said correcting (page 3 paragraph 0033 disclose correction information such as actual and reference position and size which can further adjust image by resizing and rotation patter of image) includes to correcting said first image (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images) based on said scalar information and/or said rotation information (page 1 paragraph 0010 disclose computing and accounting for any rotation, resizing and other geometric alteration, page 2 paragraph 0027 disclose that these transformation does determination such as rotation angle or resizing/scalar factors).

(9) Regarding claims 11 and 19:

wherein said generating correction information (page 3 paragraph 0033

disclose the deviation between the actual and reference is calculated, where this

is seen as calculating the need correction information first in order for correction)

includes generating, said scalar information and/or rotation information (page 1

paragraph 0010 disclose computing and accounting for any rotation, resizing and

other geometric alteration, page 2 paragraph 0027 disclose that these

transformation does determination such as rotation angle or resizing/scalar

factors) as said correction information (page 3 paragraph 0033 disclose the

deviation between the actual and reference is calculated, where this is seen as

calculating the need correction information first in order for correction) based on

correlation strength (page 2 paragraph 0022 disclose such correlation) of phase

information said Fourier transformed (page 1 paragraph 0007 disclose apply

Fourier transform as part of the image processing for selected image) first image

and second image (page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images).

(10) Regarding claims 12 and 20:

wherein said performing a Fourier transform (page 1 paragraph 0007

disclose apply Fourier transform as part of the image processing for selected

image) includes performing, a Fourier- Mellin transform (page 1 paragraph 0007

disclose apply Fourier transform as part of the image processing for selected

image) to said first image and said second image (page 2 paragraph 0013

disclose first and second selected pattern/images, page 2 paragraph 0023

disclose comparing the actual geometric of first selected pattern/image to that of

the reference in stored memory, thus there are the first and second images), and

performing processing for correlation between (page 2 paragraph 0023 disclose

the matching means, page 2 paragraph 0027 further disclose what the matching

means are match against and with what information between the two images of

interest) said Fourier-Mellin (page 1 paragraph 0007 disclose apply Fourier

transform as part of the image processing for selected image) transformed first

image and second image (page 2 paragraph 0013 disclose first and second

selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images), and

said generating correction information (page 3 paragraph 0033 disclose

correction information such as actual and reference position and size which can

further adjust image by resizing and rotation patter of image) includes generating

said scalar information and/or rotation information (page 1 paragraph 0010

disclose computing and accounting for any rotation, resizing and other geometric

alteration, page 2 paragraph 0027 disclose that these transformation does

determination such as rotation angle or resizing/scalar factors) as said correction

information (page 3 paragraph 0033 disclose correction information such as

actual and reference position and size which can further adjust image by resizing and rotation patter of image).

(11) Regarding claims 13 and 21:

wherein said correcting (page 3 paragraph 0033 disclose the deviation between the actual and reference is calculated, where this is seen as calculating the need correction information first in order for correction) includes correcting in said first image (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images) based on said scalar information and/or said rotation information (page 1 paragraph 0010 disclose computing and accounting for any rotation, resizing and other geometric alteration, page 2 paragraph 0027 disclose that these transformation does determination such as rotation angle or resizing/scalar factors) and performing a Fourier transform (page 1 paragraph 0007 disclose apply Fourier transform as part of the image processing for selected image) on said corrected first image and second image (page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored memory, thus there are the first and second images), and

said performing a correlation comparison (page 2 paragraph 0022 disclose such correlation) includes performing a correlation comparison (page 2

paragraph 0022 disclose such correlation) between to said Fourier (page 1

paragraph 0007 disclose apply Fourier transform as part of the image processing

for selected image) transformed corrected first image (page 2 paragraph 0013

disclose first and second selected pattern/images, page 2 paragraph 0023

disclose comparing the actual geometric of first selected pattern/image to that of

the reference in stored memory, thus there are the first and second images) and

said Fourier (page 1 paragraph 0007 disclose apply Fourier transform as part of

the image processing for selected image) transformed second image (page 2

paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images).

(12) Regarding claims 14 and 22:

    wherein said correcting (page 3 paragraph 0033 disclose correction

information such as actual and reference position and size which can further

adjust image by resizing and rotation patter of image) includes correcting said

first image (page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images) based on said scalar information and/or

said rotation information (page 1 paragraph 0010 disclose computing and

accounting for any rotation, resizing and other geometric alteration, page 2

paragraph 0027 disclose that these transformation does determination such as

rotation angle or resizing/scalar factors) and performing a Fourier transform

(page 1 paragraph 0007 disclose apply Fourier transform as part of the image

processing for selected image) on said corrected (page 3 paragraph 0033

disclose correction information such as actual and reference position and size

which can further adjust image by resizing and rotation patter of image) first

image and second image (page 2 paragraph 0013 disclose first and second

selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images), and

said performing a correlation comparison (page 2 paragraph 0023

disclose the matching means, page 2 paragraph 0027 further disclose what the

matching means are match against and with what information between the two

images of interest) includes performing a correlation comparison (page 2

paragraph 0023 disclose the matching means, page 2 paragraph 0027 further

disclose what the matching means are match against and with what information

between the two images of interest) between phase information (page 1

paragraph 0009 discloses the magnitude and phase of the image) of said Fourier

transformed (page 1 paragraph 0007 disclose apply Fourier transform as part of

the image processing for selected image) corrected first image (page 2

paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images) and said Fourier (page 1 paragraph 0007 disclose apply

Fourier transform as part of the image processing for selected image)

transformed second image (page 2 paragraph 0013 disclose first and second

selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images).

(15) Regarding claim 25:

a correction information generating unit (page 3 paragraph 0033 disclose

the deviation between the actual and reference is calculated, where this is seen

as calculating the need correction information first in order for correction)

configured to perform a Fourier transform and a log-polar coordinate transform

(page 1 paragraph 0007 disclose apply log-polar and Fourier transform as part of

the image processing for selected image) on said first image and said second

image (page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images), and to generate correction information

(page 3 paragraph 0033 disclose correction information such as actual and

reference position and size which can further adjust image by resizing and

rotation patter of image) of said first image (page 2 paragraph 0013 disclose first

and second selected pattern/images, page 2 paragraph 0023 disclose comparing

the actual geometric of first selected pattern/image to that of the reference in

stored memory, thus there are the first and second images) based on the results

of said Fourier transform and log-polar coordinate transform (page 1 paragraph

0007 disclose apply log-polar and Fourier transform as part of the image

processing for selected image);

a correction unit (page 3 paragraph 0033 disclose correction information

such as actual and reference position and size which can further adjust image by

resizing and rotation patter of image) configured to correct said first image (page

2 paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images) based on said correction information (page 3 paragraph

0033 disclose correction information such as actual and reference position and

size which can further adjust image by resizing and rotation patter of image) to

generate a corrected first image (page 2 paragraph 0013 disclose first and

second selected pattern/images, page 2 paragraph 0023 disclose comparing the

actual geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images);

a correlation unit (page 2 paragraphs 0022 – 0027 disclose the correlation

between two adjusted pattern/images) configured to perform a correlation

comparison (page 2 paragraphs 0022 – 0027 disclose the correlation between

two adjusted pattern/images) between said corrected first image and said second

image (page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images); and

a matching unit (page 2 paragraph 0023 disclose the matching means)

configured to determine if the corrected first image (page 2 paragraph 0013

disclose first and second selected pattern/images, page 2 paragraph 0023

disclose comparing the actual geometric of first selected pattern/image to that of

the reference in stored memory, thus there are the first and second images)

matches the second image (page 2 paragraph 0013 disclose first and second

selected pattern/images, page 2 paragraph 0023 disclose comparing the actual

geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images) based on results of said

correlation unit (page 2 paragraphs 0022 – 0027 disclose the correlation between

two adjusted pattern/images).

Claim Rejections – 35 USC 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 7-8, 15-16 and 23-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wendt (US 2002/0090109 A1) in view of Oosawa (US 2003/0039405

A1).

        (1) Regarding claims 7 and 8:

                Wendt teaches regarding matching means (page 2 paragraph 0023

disclose comparing between the first image and the reference image), corrected

first and second image (page 2 paragraphs 0022 – 0027 disclose the correlation

between two adjusted pattern/images, which further show that correction means

of transforms are carry out than matching mean by the use of the transforms),

correlation due to phase information (page 1 paragraph 0009 disclose that phase

of the Fourier transform of an image contains most of the information of the

selected images, such that this information can still disclose a large portion of

information for inspection).

                Wendt does not teach regarding matching base on parallel movement

information, by extraction of common areas and determination parallel

information to see if movement information is smaller than predetermine amount

of parallel movement.

                However, Oosawa teach regarding image matching (title, abstract disclose

image position matching, figure 1 and figure 3) base on parallel movement (page

1 paragraph 0008 discloses position matching of images comprising the

performance by parallel / linear movement) and common areas (page 1

paragraph 0008 disclose image matching by areas that can be global, template

regions; plurality of regions, which mostly are small regions) and determination

parallel information to see if movement information is smaller than predetermine

amount of parallel movement (page 1 paragraph 008 disclose image matching

concern with parallel movement, where determination of the parallel shift quantity

is required and obtain for image matching, such that a two-dimensional n

polynomial function of n>2 is use to. Where 2 is the determine number and n is

the move. Examiner see this as one of the direct way to test and determine if the

parallel movement information n is smaller than predetermined amount of parallel

movement value 2).

It would have been obvious to one having ordinary skill in the art at the

time of the invention was made use the image matching base on parallel

movement and of common areas of Oosawa in the method of Wendt in order that

it will have the desire improvement in comparative reading performance, which is

not dependent on the skill level of the diagnostician (paragraph 0006), but if there

is a diagnostician he will be able to accurately discern the difference between two

images such that overlooking of a diseased potion can be prevented (page 1

paragraph 0007). This will further to be possible to obtain image of interest by

globally matching with high degree of accuracy (page 2 paragraph 0011).

(2) Regarding claims 15 and 23:

Wendt and Oosawa further teaches:

wherein said correcting (Wendt, page 3 paragraph 0033 disclose the

deviation between the actual and reference is calculated, where this is seen as

calculating the need correction information first in order for correction) includes

generating, parallel movement information (Oosawa, page 1 paragraph 0008

discloses position matching of images comprising the performance by parallel /

linear movement) of said corrected first image and second image (Wendt, page 2

paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images) based on a peak position of correlation strength (Wendt,

page 2 paragraph 0022 disclose such correlation) of phase information (Wendt,

page 1 paragraph 0009 discloses the magnitude and phase of the image) of said

corrected first image and second image (Wendt, page 2 paragraph 0013 disclose

first and second selected pattern/images, page 2 paragraph 0023 disclose

comparing the actual geometric of first selected pattern/image to that of the

reference in stored memory, thus there are the first and second images), and

extracting common areas (Oosawa, page 1 paragraph 0008 disclose image

matching by areas that can be global, template regions; plurality of regions,

which mostly are small regions) of said first image and said second image

(Wendt, page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images) from are said movement amount

information (Oosawa, page 1 paragraph 008 disclose image matching concem

with parallel movement, where determination of the parallel shift quantity is required and obtain for image matching, such that a two-dimensional n polynomial function of n>2 is use to. Where 2 is the determine number and n is the move. Examiner see this as one of the direct way to test and determine if the parallel movement information n is smaller than predetermined amount of parallel movement value 2),

said performing a correlation comparison (Wendt, page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest) includes performing a correlation comparison (Wendt, page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest) between of said extracted common areas (Oosawa, page 1 paragraph 0008 disclose image matching by areas that can be global, template regions; plurality of regions, which mostly are small regions), and

determining if the corrected (Wendt, page 2 paragraph 0023 disclose the matching means, page 2 paragraph 0027 further disclose what the matching means are match against and with what information between the two images of interest) first image (Wendt, page 2 paragraph 0013 disclose first and second selected pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images) matches (Wendt, page 2

paragraph 0023 disclose the matching means, page 2 paragraph 0027 further

disclose what the matching means are match against and with what information

between the two images of interest) the second image (Wendt, page 2 paragraph

0013 disclose first and second selected pattern/images, page 2 paragraph 0023

disclose comparing the actual geometric of first selected pattern/image to that of

the reference in stored memory, thus there are the first and second images)

includes determining if the corrected (Wendt, page 3 paragraph 0033 disclose

correction information such as actual and reference position and size which can

further adjust image by resizing and rotation patter of image) first image (Wendt,

page 2 paragraph 0013 disclose first and second selected pattern/images, page

2 paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images) matches (Wendt, page 2 paragraph 0023 disclose the

matching means, page 2 paragraph 0027 further disclose what the matching

means are match against and with what information between the two images of

interest) the second image (Wendt, page 2 paragraph 0013 disclose first and

second selected pattern/images, page 2 paragraph 0023 disclose comparing the

actual geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images) based on results of said

correlation comparison (Wendt, page 2 paragraph 0023 disclose the matching

means, page 2 paragraph 0027 further disclose what the matching means are

match against and with what information between the two images of interest)

between said extracted common areas. (Oosawa, page 1 paragraph 0008

disclose image matching by areas that can be global, template regions; plurality

of regions, which mostly are small regions).

(14) Regarding claims 16 and 24:

wherein said correcting (Wendt, page 2 paragraph 0023 disclose the

matching means, page 2 paragraph 0027 further disclose what the matching

means are match against and with what information between the two images of

interest) includes generating, parallel movement information (Oosawa, page 1

paragraph 0008 discloses position matching of images comprising the

performance by parallel / linear movement) of said corrected first image and

second image (Wendt, page 2 paragraph 0013 disclose first and second selected

pattern/images, page 2 paragraph 0023 disclose comparing the actual geometric

of first selected pattern/image to that of the reference in stored memory, thus

there are the first and second images) based on a peak position of correlation

strength (Wendt, page 2 paragraph 0022 disclose such correlation) of phase

information Wendt, page 1 paragraph 0009 discloses the magnitude and phase

of the image) of said corrected first image and second image (Wendt, page 2

paragraph 0013 disclose first and second selected pattern/images, page 2

paragraph 0023 disclose comparing the actual geometric of first selected

pattern/image to that of the reference in stored memory, thus there are the first

and second images), and

determining if the corrected first image (Wendt, page 2 paragraph 0013

disclose first and second selected pattern/images, page 2 paragraph 0023

disclose comparing the actual geometric of first selected pattern/image to that of

the reference in stored memory, thus there are the first and second images)

matches the second image (Wendt, page 2 paragraph 0013 disclose first and

second selected pattern/images, page 2 paragraph 0023 disclose comparing the

actual geometric of first selected pattern/image to that of the reference in stored

memory, thus there are the first and second images) is performed when said

parallel movement information is smaller than a predetermined amount of parallel

movement (Oosawa, page 1 paragraph 008 disclose image matching concern

with parallel movement, where determination of the parallel shift quantity is

required and obtain for image matching, such that a two-dimensional n

polynomial function of n>2 is use to. Where 2 is the determine number and n is

the move. Examiner see this as one of the direct way to test and determine if the

parallel movement information n is smaller than predetermined amount of parallel

movement value 2).

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Bloom et al (US Patent Number 6,282,300 B1) disclose rotation, scale, and

translation resilient public watermarking for images using a log-polar Fourier transform.

Wendt (US 2002/0126870 A1) disclose method to detect watermark resistant to resizing and translation.

Reisman et al (US 2003/0169910 A1) disclose fingerprint matching using ridge feature maps.

Chaikin et al (US Patent Number 4,267,573) disclose image-processing system.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsung-Yin Tsai whose telephone number is (571) 270-1671. The examiner can normally be reached on Monday - Friday 8 am - 5 pm ESP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tsung-Yin Tsai
November 2, 2007

JINGGE WU
SUPERVISORY PATENT EXAMINER